

REMARKS

This Response is submitted in reply to the Office Action dated December 23, 2009, and in conjunction with the enclosed Request for Continued Examination. Claims 35 to 67, 69, 70, 72, and 74 are currently pending in this application. Claims 1 to 34 and 68, 71, and 73 were previously canceled. Claims 35, 69, and 74 are in independent form. Claim 74 has been amended. Entry of the amendment is respectfully requested, and support for the amendment can be found at least at paragraph [0039] of the specification and Figures 1 and 7. Favorable reconsideration is respectfully requested in light of the remarks below, which include Applicant's reply to the Response to Arguments section on pages 8 to 10 of the Office Action. Please charge Deposit Account No. 02-1818 for any payments due in connection with this Response.

As noted above, Applicant has filed a Request for Continued Examination with this Response. Accordingly, Applicant requests that the Examiner provide an upcoming Office Action which will "... identify any claims which he or she judges, as presently recited, to be allowable and/or ... suggest any way in which he or she considers that rejected claims may be amended to make them allowable" in accordance with §707.07(d) of the MPEP.

The Office Action rejected each of the independent Claims under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Publication No. 2002/0061734 to Ito ("Ito") in view of U.S. Patent No. 7,065,379 to Kim et al. ("Kim"). Applicant respectfully disagrees with, and traverses, such rejections.

Independent Claim 35 is directed to a wireless communication device including, among other elements, at least one first current-conducting corrective element coupled to the at least one circuit board, wherein the at least one first current-conducting corrective element comprises at least one current conducting track for increasing a current level capacity in the at least one first current-conducting corrective element relative to a total current level capacity directly from the circuit board, and wherein the first current-conducting corrective element is embodied such that at least one of an amplitude level and a phase angle of electrical currents on the at least one antenna, the at least one circuit board, and the at least one first current-conducting corrective element, is adjusted in relation to each other to distribute the electrical currents in a substantially even manner, and to reduce electromagnetic exposure which results from the electrical currents.

Applicant submits that neither Ito or Kim alone, nor the combination of Ito and Kim, discloses or renders obvious that the at least one first current-conducting corrective element comprises at least one current conducting track for increasing a current level capacity in the at least one first current-conducting corrective element relative to a total current level capacity directly from the circuit board. Ito is directed to a conductive plate 3 coupled to a shield case 2 such that the impedance between the shield case 2 and the conductive plate 3 becomes approximately infinite at the electrically opened end, while becoming close to zero at the short circuit forming end. (¶38, ll. 1-4). Ito further states that under this arrangement, the maximum value of the local average SAR at the hot spot 6 can be effectively reduced. (¶38, ll. 4-6). That is, “since the impedance between the shield case 2 and the conductive plate 3 gradually increases from the short circuit forming end to the electrically opened end, the high-frequency current corresponding to the radio communication frequency has difficulty in flowing in the shield case 2. So, the amount of radiation of the electromagnetic waves from the shield case 2 is reduced.” (¶38, 6-13). Applicant therefore submits that Ito, which is directed to a device which makes it difficult for current to flow in the communication device, does not disclose or render obvious at least one first current-conducting corrective element comprises at least one current conducting track for increasing a current level capacity in the at least one first current-conducting corrective element relative to a total current level capacity directly from the circuit board, as in independent Claim 35 as presently recited. Likewise, Applicant submits that Kim is concerned with reducing the overall size of a communication device, while maintaining a desired “electrical length.” (col. 3, ll. 40-43). Thus, Applicant submits that Kim does not disclose at least one current conducting track for increasing a current level capacity in the at least one first current-conducting corrective element, and thus that Kim does not remedy the deficiencies of Claim 35 with respect to increasing a current level capacity.

In reply to the Response to Arguments section paragraph 6 of the Office Action on pages 8 to 9, Applicant agrees with the Examiner’s statement that “current is still present on the conductive plate 3.” However, this statement is not dispositive of the claim as presently recited. Specifically, Claim 35 does not require that current is not present on the “at least one first current conducting element.” Rather, Claim 35 requires “the at least one first current-conducting corrective element comprises at least one current conducting track for increasing a current level

capacity in the at least one first current-conducting corrective element relative to a total current level capacity directly from the at least one circuit board.” Moreover, Applicant disagrees with the Examiner’s interpretation of Ito’s conductive plate 3 as “at least one first current conducting corrective element comprises at least one current conducting track for increasing a current level capacity in the at least one first current-conducting corrective element relative to a total current level capacity directly from the circuit board.” Office Action, page 9. Specifically, such a construction fails to disclose each element of the Claim 35 because if the conductive plate 3 is “at least one first current conducting corrective element,” then there is no disclosure of at least one current conducting track for increasing a current level capacity in the at least one first current-conducting corrective element relative to a total current level capacity directly from the circuit board. Applicant requests that, if the Examiner intends to construe the conductive plate 3 of Ito as the “at least one first current conducting corrective element,” that the Examiner provide an explanation of where Ito discloses “the at least one first current-conducting corrective element comprises at least one current conducting track for increasing a current level capacity in the at least one first current-conducting corrective element relative to a total current level capacity directly from the at least one circuit board.”

As discussed above, Applicant respectfully notes that the Office Action does not specifically address each element of Claims 35, 69, and 74 by explaining which disclosure of Ito or Kim is being construed as disclosing the element. For example, as discussed above, it is unclear what disclosure, if any, is being asserted as “at least one current conducting track for increasing a current level capacity in the at least one first current-conducting corrective element relative to a total current level capacity directly from the at least one circuit board.” The MPEP, as cited below, explains that it is important for the Patent Office to properly communicate the basis for a rejection so that the issues can be identified early and the Applicant can be given fair opportunity to reply. Accordingly, Applicant requests withdrawal of the rejections on this basis. Alternatively, Applicant requests clarification of such rejections in a non-final Office Action.

The MPEP supports Applicant’s position. Section 706.02(j) of the MPEP states:

It is important for an examiner to properly communicate the basis for a rejection so that the issues can be identified early and the applicant can be given fair opportunity to reply . . . Since patent examiners cannot normally be compelled to testify in legal proceedings regarding their mental processes (see MPEP §

1701.01), it is important that the written record clearly explain the rationale for decisions made during prosecution of the application.

Nonetheless, to advance prosecution of this application, Applicant responds above, and further responds below, as best as the Applicant understands the rejections.

In addition, Applicant submits that neither Ito or Kim alone, nor the combination of Ito and Kim, discloses or renders obvious a wireless communication device including at least one current-conducting corrective element embodied such that at least one of an amplitude level and a phase angle of electrical currents on the at least one antenna, the at least one circuit board, and the at least one first current-conducting corrective element is adjusted in relation to each other to distribute the electrical currents in a substantially even manner, and to reduce electromagnetic exposure which results from the electrical currents. Specifically, Applicant submits that Ito discloses an antenna device and a portable radio communication device with a conductive plate shaped to impact the effective length of the conductive plate (abstract). Thus, for example, "In the antenna device, the slits make the effective length of the conductive plate $((2n+1)/4)$ times the wavelength of a radio communication frequency, wherein n is a natural number including zero (§22, ll. 1-4). Applicant submits that Ito is silent as to at least one current-conducting corrective element embodied such that at least one of an amplitude level and a phase angle of electrical currents is adjusted. Likewise, Kim discloses that "it is an object of the present invention to provide portable radio terminal equipment which can maintain a good radiation efficiency, while reducing the total size of a body and an antenna of the terminal equipment to $\lambda/2$ and below." (col. 2, ll. 3-7). Thus, Applicant submits that Kim is also concerned with the impact of the conductive elements of the communication device on the SAR with respect to the wavelength of the received signal alone.

On the other hand, amended independent claim 35 is directed to a communication device including, among other elements, at least one current-conducting corrective element embodied such that at least one of an amplitude level and a phase angle of electrical currents on the at least one antenna, the at least one circuit board, and the at least one first current-conducting corrective element is adjusted in relation to each other to distribute the electrical currents in a substantially even manner, and to reduce electromagnetic exposure which results from the electrical currents.

Thus, Applicant submits that Ito and Kim, alone or in combination, do not disclose or render obvious amended independent claim 35.

In reply to the Response to Arguments section paragraph 7 of the Office Action on pages 9 to 10, Applicant notes that Office Action admits that “Ito is silent as to the specific amplitude and phase angle of the current in the entire device.” The Office Action continues to state that “the Examiner notes that since current is modeled by its amplitude and phase angle and the current on the conductive plate 3 is current generated by the device, i.e., pcb, antenna, feed, etc..., it is inherent that the current conducting corrective element is “embodied such that at least one of an amplitude level and a phase angle of electrical currents on the at least one antenna, the at least one circuit board, and the at least one first current-conducting corrective element is adjusted in relation to each other to distribute the electrical currents in a substantially even manner, and to reduce electromagnetic exposure which results from the electrical currents,” as recited in the claims. As an initial matter, Applicant requests that the Examiner cite a reference in support of this statement or take Official Notice. In any event, Applicant respectfully disagrees because it is not inherent that “the current conducting corrective element is embodied such that at least one of an amplitude level and a phase angle of electrical currents on the at least one antenna, the at least one circuit board, and the at least one first current-conducting corrective element is adjusted in relation to each other to distribute the electrical currents in a substantially even manner, and to reduce electromagnetic exposure which results from the electrical currents.” Applicant requests that the Office Action provide a clearly articulated explanation of how the disclosure of Ito might inherently disclose that the amplitude level or phase angle of electrical currents in the antenna 5, the circuit board, and the conductive plate 3 is adjusted in relation to each other to distribute the electrical currents in a substantially even manner, and to reduce electromagnetic exposure which results from the electrical currents.

Claims 36 to 47, 49, 50, and 52 to 67, and 70, which depend directly or indirectly from amended independent Claim 35, are also allowable for the reasons given above with respect to Claim 35, and because of the additional features recited in these claims.

Independent Claim 69 and dependent claim 72, which depends directly from independent Claim 69, includes certain similar elements to amended independent Claim 35. For reasons similar to those given above with respect to Claim 35, and because of the additional features

recited in these claims, Applicant respectfully submits that independent Claim 69 and dependent Claim 72 are each patentably distinguished over Ito in view of Kim and are in condition for allowance.

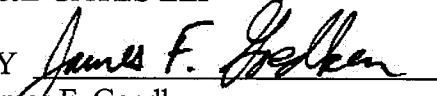
Independent Claim 74 is directed to a wireless communication device including, among other elements, at least one current-conductive corrective element that compensates current to reduce overall current away from the at least one circuit board by increasing current on the at least one current-conductive corrective element in a direction opposite of current flowing on the at least one circuit board. Applicant initially submits (and the Office Action admitted) that claim 74 includes certain similar elements to independent Claims 35 and 69. Thus, for reasons similar to those given above with respect to Claims 35 and 69, and because of the additional features recited in Claim 74, Applicant submits that Claim 74 is patentably distinguished over Ito in view of Kim and is in condition for allowance.

Moreover, Applicant submits that Ito in view of Kim do not disclose or render obvious at least one current-conductive corrective element that compensates current to reduce overall current away from the at least one circuit board by increasing current on the at least one current-conductive corrective element in a direction opposite of current flowing on the at least one circuit board, wherein the current-conducting corrective element comprises at least one current conducting track for increasing current on the at least one current-conductive corrective element in a direction opposite of current flowing on the at least one circuit board, as recited in Claim 74. Specifically, Ito and Kim are both silent as to the directions of current flow caused by a current conducting track, and the impact of such directions on the emitted energy. Thus, for this additional reason, Applicant respectfully submits that amended independent Claim 74 is patentably distinguished over Ito in view of Kim and is in condition for allowance.

An earnest endeavor has been made to place this application in condition for formal allowance and is courteously solicited. If the Examiner has any questions regarding this Response, Applicant respectfully requests that the Examiner contact the undersigned.

Respectfully submitted,

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